IN THE CLAIMS:

Please add new claims 26-33 to claims 1-25, which are currently pending:

1. (PREVIOUSLY AMENDED) An isolated polynucleotide comprising a nucleotide sequence selected from the group consisting of:

a) a nucleotide sequence encoding the IGS1 polypeptide according to SEQ ID NO: 2;

b) a nucleotide sequence of the DNA insert contained in the deposit no. CBS 102049 wherein the nucleotide sequence is SEQ ID NO: 1;

c) a nucleotide sequence having at least 80% sequence identity to the nucleotide sequence of (a) or (b); and

d) a nucleotide sequence that is complementary to the nucleotide sequence of (a) or (b) or (c).

2. (PREVIOUSLY AMENDED) The polynucleotide of claim 1, wherein said polynucleotide comprises the nucleotide sequence of SEQ ID NO:1, and wherein the nucleotide sequence encodes an IGS1 polypeptide of SEQ ID NO:2.

3. (PREVIOUSLY AMENDED) The polynucleotide of claim 1 wherein said polynucleotide comprises a nucleotide sequence that is at least 80% identical to that of SEQ ID NO:1.

4. (ORIGINAL) The polynucleotide of claim 3 which is the polynucleotide of SEQ ID NO: 1.

5. (PREVIOUSLY AMENDED) The polynucleotide of any one of claims 1-4 which is DNA or RNA.

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6. (PREVIOUSLY AMENDED) An expression system comprising a DNA or RNA molecule, wherein said expression system produces an IGS1 polypeptide comprising an amino acid sequence, which has at least 80% identity with the polypeptide of SEQ ID NO:2 when said expression system is present in a host cell.

7. (ORIGINAL) A host cell comprising the expression system of claim 6.

8. (ORIGINAL) A host cell according to claim 7 which is a yeast cell.

9. (ORIGINAL) A host cell according to claim 7 which is an animal cell.

10. (PREVIOUSLY AMENDED) IGS1 receptor membrane preparation derived from a cell according to any one of claims 7-9.

11. (PREVIOUSLY AMENDED) A process for producing an IGS1 polypeptide comprising culturing a host cell of claim 7 under conditions sufficient for the production of said polypeptide and recovering the polypeptide from the culture.

12. (PREVIOUSLY AMENDED) A process for producing a cell which produces an IGS1 polypeptide comprising transforming or transfecting a cell with the expression system of claim 6, wherein the cell produces an IGS1 polypeptide.

13. (PREVIOUSLY AMENDED) An IGS1 polypeptide comprising an amino acid sequence, which is at least 80% identical to the amino acid sequence of SEQ ID NO:2.

14. (ORIGINAL) The polypeptide of claim 13 which comprises the amino acid sequence of SEQ ID NO: 2.

15. (ORIGINAL) An antibody immunospecific for IGS1 polypeptide of claim 13.

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16. (PREVIOUSLY AMENDED) A method for the treatment of a subject in need of enhanced activity or expression of the IGS1 polypeptide of claim 13 comprising at least one of:

(a) administering to the subject a therapeutically effective amount of an agonist to said polypeptide; and

(b) providing to the subject an isolated polynucleotide comprising a nucleotide sequence that has at least 80% identity to a nucleotide sequence encoding the IGS1 polypeptide of SEQ ID NO:2 or a nucleotide sequence complementary to said nucleotide sequence, wherein the polynucleotide directs production of said polypeptide activity in vivo.

17. (PREVIOUSLY AMENDED) A method for the treatment of a subject having need to inhibit activity or expression of a IGS1 polypeptide as claimed in claim 13 comprising at least one of:

(a) administering to the subject a therapeutically effective amount of an antagonist to said polypeptide;

(b) providing to the subject an isolated polynucleotide that inhibits the expression of the nucleotide sequence encoding said polypeptide; and

(c) administering to the subject a therapeutically effective amount of a polypeptide that competes with said polypeptide for its ligand.

18. (PREVIOUSLY AMENDED) A process for diagnosing a disease or a susceptibility to a disease in a subject, wherein the disease is related to expression or activity of the IGS1 polypeptide of claim 13 in a subject comprising at least one of:

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(a) determining the presence or absence of a mutation in the nucleotide sequence encoding said IGS1 polypeptide in the genome of said subject; and

(b) analyzing for the presence or amount of the IGS1 polypeptide expression in a sample derived from said subject.

19. (ORIGINAL) A method for identifying agonists to the IGS1 polypeptide of claim 13 comprising:

(a) contacting a cell which produces a IGS1 polypeptide with a test compound; and

(b) determining whether the test compound effects a signal generated by activation of the IGS1 polypeptide.

20. (ORIGINAL) An agonist identified by the method of claim 19.

21. (ORIGINAL) The method for identifying antagonists to the IGS1 polypeptide of claim 13 comprising:

(a) contacting a cell which produces a IGS1 polypeptide with an agonist; and

(b) determining whether the signal generated by said agonist is diminished in the presence of a candidate compound.

22. (ORIGINAL) An antagonist identified by the method of claim 21.

23. (ORIGINAL) A recombinant host cell produced by a method of claim 12 or a membrane thereof expressing an IGS1 polypeptide.

24. (ORIGINAL) A method of creating a genetically modified non-human animal comprising the steps of

a) ligating the coding portion of a polynucleotide consisting essentially of a nucleic acid sequence encoding a protein having the amino acid sequence SEQ

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ID NO: 2 or a biologically active fragment thereof to a regulatory sequence which is capable of driving high level gene expression or expression in a cell type in which the gene is not normally expressed in said animal; or

b) engineering the coding portion of a polynucleotide consisting essentially of a nucleic acid sequence encoding a protein having the amino acid sequence SEQ ID NO: 2 or a biologically active fragment thereof and reintroducing said sequence in the genome of said animal in such a way that the endogenous gene alleles encoding a protein having the amino acid sequence SEQ D NO: 2 or a biologically active fragment are fully or partially inactivated .

25. (PREVIOUSLY ADDED) The isolated polynucleotide of claim 1, wherein the nucleotide sequence has at least 90% identity to the nucleotide sequence of (a) and (b).

26. (NEW) The isolated polynucleotide of claim 1, wherein the polynucleotide encodes a protein that is a causative agent in at least one CNS disorder.

27. (NEW) The isolated polynucleotide of claim 1, wherein the polynucleotide encodes a protein that is used in diagnosing, preventing, ameliorating or correcting at least one CNS disorder.

28. (NEW) The isolated polynucleotide of claim 26, wherein the CNS disorder is schizophrenia, Tourette's syndrome, Parkinson's disease, Huntington's disease, dyskinesias, addition/dependency/craving, or attention deficit/hyperactivity disorder (ADHD).

29. (NEW) The isolated polynucleotide of claim 27, wherein the CNS disorder is schizophrenia, Tourette's syndrome, Parkinson's disease, Huntington's disease,

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dyskinesias, addition/dependency/craving, or attention deficit/hyperactivity disorder (ADHD).

30. (NEW) The isolated polynucleotide of claim 26, wherein the polynucleotide is expressed in brain tissue.

31. (NEW) The isolated polynucleotide of claim 30, wherein the polynucleotide is expressed in at least one of the caudate nucleus and putamen.

32. (NEW) The isolated polynucleotide of claim 30, wherein the polynucleotide is expressed in at least one of the following tissues: thalamus, substantia nigra, cerebellum, medulla, and amygdala.

33. (NEW) The isolated polynucleotide of claim 26, wherein the polynucleotide encodes a IGS1 polypeptide having IGS1 receptor activity.

REMARKS

Applicants respectfully request that the amendments to the specification and the claims be entered before the application is examined.

Amendments to the Specification

Entry of the substitute paragraphs before examination of this application is respectfully requested. The changes merely correct typographical errors in the term "Gα16", which was inadvertently written as "G 16" in the specification. The correct term, " Gα16" is present in some instances in the specification, for example on page 38, line 34. The correction of the incorrect terms to "Gα16" does not add new matter.

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